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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/807,491

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Robert J. Zolla

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05/18/2006

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EXAMINER

ROGERS, SCOTT A

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/807,491

Applicant(s)

ZOLLA ET AL.

Examiner

Scott A. Rogers

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,6,8,12,13,17,19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,8,12,13,17,19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: p. 2-8

***Response to Arguments***

Applicant's arguments filed 03 March 2006 have been fully considered but they are not persuasive.

Applicant argues with respect to claim 1 that neither Lowe et al nor Kim et al, alone or in combination, teach the use of both colors at the same location of the watermark pattern. However, amended claim 1 only requires "fewer than N colorants at each spatial location of the watermark pattern". Therefore claim 1 still reads on the combination of Kim and Lowe et al as set forth in the rejection.

Applicant also argues with respect to claim 17 that neither Lowe et al or Kim et al, alone or in combination, teach exposing the watermark pattern to both the magenta and yellow colorant-producing component at each spatial location of the watermark pattern. However, amended claim 17 only requires the watermark pattern to not be exposed "to the cyan colorant-producing component of the color recording medium at each spatial location of the watermark pattern". Therefore claim 17 still reads on the combination of Kim and Lowe et al as set forth in the rejection.

The terminal disclosure filed 03 March 2006 is acknowledged.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al (US 2005/0167505 A1).

Kim et al disclose a method of recording a watermark pattern on a color recording medium that forms an image using a number N of colorants, the method comprising the step of forming the watermark pattern using at least two colorants, but fewer than N colorants at each spatial location of the watermark pattern (see paragraphs 9, 13, 18, and 60).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, 8, 12, 17, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al (US 2003/0012569 A1) in view of Kim et al (US 2005/0167505 A1).

Referring to claim 1:

Lowe et al disclose recording a watermark pattern on a recording medium (see abstract and paragraphs 8 and 11).

While Lowe et al disclose that the watermark may be polychromatic, they do not specifically disclose forming the watermark pattern on the recording medium using at least two colorants, but fewer than N colorants at each spatial location of the watermark pattern.

Kim et al disclose recording the watermark pattern (3-D code pattern) on a color recording medium using at least two colorants, but fewer than N colorants at each spatial location of the watermark pattern (see paragraphs 9, 13, 18, and 60).

It would have been obvious to one of ordinary skill in the art to have combined the watermark pattern forming application taught by Lowe et al with the color code pattern recording application taught by Kim et al in order to provide high-density and robust or redundant data embedding and thereby enable embedding of a relatively large amount of data and greater range of applications.

Referring to claim 2:

Lowe et al disclose forming the watermark pattern by applying exposure energy onto the recording medium (see paragraphs 11, 13 or 14).

Referring to claim 6:

Lowe et al disclose use of a photosensitive recording medium (see abstract and paragraph 8).

Referring to claim 8:

Lowe et al disclose the recording medium as a motion picture negative (see abstract and paragraph 12).

Referring to claim 12:

Lowe et al disclose the exposure energy as light (see paragraphs 11, 13 or 14).

Referring to claim 17:

Lowe et al disclose recording a watermark pattern on a photosensitive recording medium (see abstract and paragraphs 8 and 11).

Lowe et al does not specifically disclose the recording medium having at least a cyan colorant-producing component, a magenta colorant-producing component, and a yellow colorant-producing component, and does not disclose the step of exposing the watermark pattern to both the magenta colorant producing component and the yellow colorant producing component, but not to the cyan colorant producing component of the color recording medium at each spatial location of the watermark pattern.

Kim et al disclose recording a watermark pattern (3-D code pattern) on a color recording medium having at least a cyan colorant-producing component, a magenta colorant-producing component, and a yellow colorant-producing component (see paragraph 41). Kim et al further disclose the step of forming the watermark pattern on a recording medium using both a magenta colorant producing component and the yellow colorant producing component, but not a cyan colorant producing component at each spatial location of the watermark pattern (see paragraphs 9, 13, 18, and 60).

It would have been obvious to one of ordinary skill in the art to have combined the watermark pattern forming application taught by Lowe et al with the color code pattern recording application taught by Kim et al in order to provide high-density and robust or redundant data embedding on a color photosensitive recording medium

having multiple colorant producing components, thereby enable embedding of a relatively large amount of data and greater range of applications with such a recording medium.

Referring to claim 19:

Lowe et al disclose the step of forming a watermark pattern by exposure of the recording medium being performed prior to exposure of the recording medium to image content (see abstract and paragraph 11)

Referring to claim 21:

Lowe et al disclose the recording medium as a motion picture negative (see abstract and paragraph 12).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowe et al and Kim et al as applied to claim 2 above, and further in view of Allen et al (US 5118526 A).

Lowe et al and Kim et al do not disclose using heat as the applied exposure energy for forming a watermark pattern.

Allen et al teach application of exposure energy for forming a watermark pattern on a photosensitive recording medium (see abstract).

It would have been obvious to one of ordinary skill in the art to have adapted the combination of Lowe et al and Kim et al to form watermark patterns by application of heat energy in order to broaden application of the robust or redundant high-density data embedding technique to a common type of recording.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Rogers whose telephone number is 571-272-7467. The examiner can normally be reached Monday through Friday 6:00am-2:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Moore can be reached at 571-272-7437.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC2600 Customer Service at 571-272-2600. Official correspondence by facsimile should be sent to 571-273-8300. The USPTO contact Center phone numbers are 800-PTO-9199.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

08 May 2006

  
SCOTT ROGERS  
PRIMARY EXAMINER